





## CPS-008



# PETITIONER'S EXHIBIT 4

Cellular telephony provides two-way signaling and voice communications between mobile radiotelephones and the Public Switched Telephone Network (PSTN) or between mobile radiotelephones, through the combined use of radio frequencies and wireline transmissions.

The broadcast area for a cellular system is defined and licensed by the Federal Communications Commission. Unlike television or radio broadcast systems which utilize a single high-powered transmitter to cover an entire broadcast area, cellular systems divide the broadcast area into small cells (hence the name "cellular") and utilize multiple base site transmitter/receiver locations known as cell sites. The cellular system configuration and its voice channel (frequency) distribution must be arranged to serve subscribers using a maximum of 312 radio frequency channel pairs for voice channels. Channels are allocated among various cells in the system according to the distribution of subscriber traffic in those cells and as long as the total channels in the system are adequate for the subscriber load, they can be distributed in as many cells as desired. However, once the need for additional channels exceeds the frequencies available (312), and user density exceeds that which can be served with a simple cell layout, frequency re-use, through subdivision or sectorization of the cells, will be needed. When this happens, there is much less latitude about where to put specific frequencies as it then becomes necessary to fit into a system-wide frequency re-use pattern.

For any cellular re-use pattern, there exists an ideal grid of cell sites. Cells on these grid points will have optimum spacing from their co-channel cells. Any cell offset from its ideal point results in distortion of the usable coverage pattern from one or more co-channel cells. Local terrain features will also distort the re-use grid where they introduce variations in the normal path. Another limitation on defining the re-use grid for an area is the availability of actual cell sites as it is often necessary to compromise on cell site location.

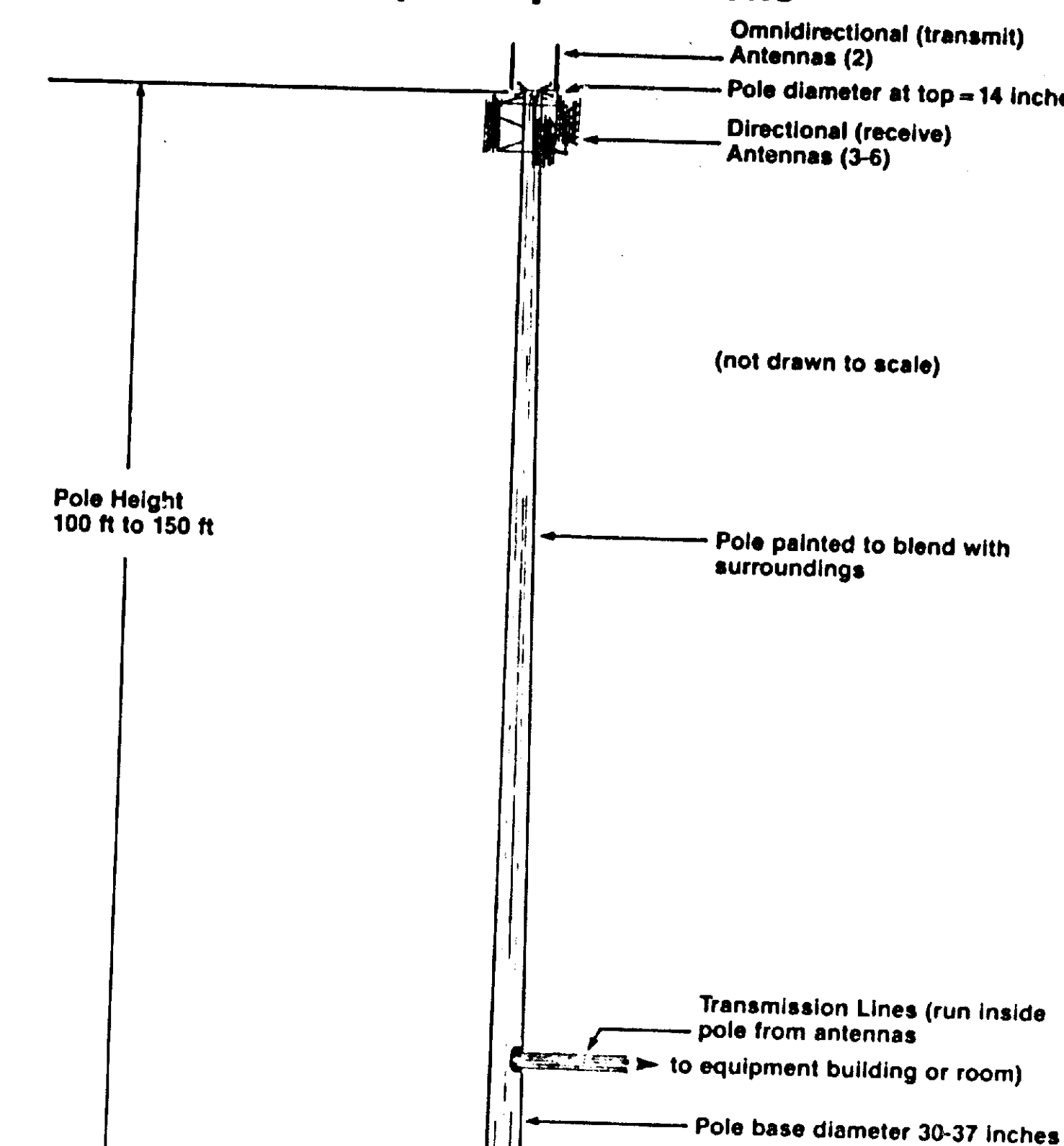
The FCC allocates 333 channels for each cellular system. There are 312 voice channels after 21 calling (signaling) channels have been removed. The normal re-use pattern limits are determined by dividing 312 by the number of cells in a complete pattern. This results in the channels per cell site for uniform distribution within the pattern. The point at which cell subdivision is required will be determined by the user distribution in the area. It will usually not be possible to load all cell sites up to their maximum number of channels because distribution will seldom be uniform over the area. If user distribution is significantly skewed (as it is in the Baltimore and Washington Metropolitan Areas), certain cells will reach their capacity before others, and after all 312 channels have been allocated.

There are two types of transmit/receive patterns in cellular systems: omnidirectional (omni) and sector. Cell sites transmitting or capturing (receiving) signals in an omni pattern, transmit and receive equally in all directions in the 360 degree range of the cell site, whereas sector sites utilize directional antennas which transmit and receive from specific portions of the 360 degree range of the cell site. When an omni cell site is transmitting or receiving signals, the voice channel assignments for the calls



Cellular One Monopole

## Monopole Specifications



PETITIONER'S  
EXHIBIT 6  
CELLULAR ONE  
A Southwestern Bell Company

7615 Fitch Lane  
Baltimore, Maryland 21236  
March 24, 1988

The Honorable J. Robert Haines  
Zoning Commissioner for Baltimore County  
County Office Building  
111 West Chesapeake Avenue  
Towson, Maryland 21204

Re: Case No.: 88-436-A  
Petition for Zoning Variance  
Petitioners: The Howard-Fitch Co.  
and Cellular One

Dear Commissioner Haines:

As the owner of the property at 7615 Fitch Lane, I am writing to you to advise you of my support of the requested zoning variance for Cellular One's proposed 150 foot communications tower on the property of the Howard-Fitch Company at 7617 Fitch Avenue.

It is my understanding that this matter is scheduled for a hearing on April 8, 1988 at 12:00 p.m. I have reviewed the Notice of Hearing and understand that a variance, if granted, would permit the 150 monopole tower to be erected within 12 feet of my common property line with The Howard-Fitch Company. I also understand that the required setback distance is 30 feet.

Because this area is zoned ML-IM, I believe that this proposed use would be consistent with the present industrial zoning. Because these properties are so close to the Baltimore Beltway, I do not believe that the proposed tower will have any adverse impact.

I may be unable to attend the hearing on April 8; however, I ask that you or the Deputy Zoning Commissioner make my letter a part of the file in this case. Thank you for your consideration of this matter.

Very truly yours,

Elmer W. Fitch

cc: Mr. Meredith Howard, President  
Howard-Fitch Company

Stephen J. Nolan, Esquire  
Attorney for Cellular One

Law Offices  
NOLAN, PLUMHOFF & WILLIAMS  
CHARTERED  
SUITE 1105, HAMPTON PLAZA  
300 EAST JOPPA ROAD  
TOWSON, MARYLAND 21204-3012  
(301) 922-7800  
TELEFAX (301) 926-2765

February 24, 1988

### HAND DELIVERY

The Honorable J. Robert Haines  
Zoning Commissioner for Baltimore County  
County Office Building  
111 West Chesapeake Avenue  
Towson, Maryland 21204

Re: Item No. 268  
Petition for Zoning Variance on  
behalf of Washington/Baltimore  
Cellular Telephone Company, et al.  
Date Filed: January 19, 1988  
Owner: The Howard Fitch Company  
REQUEST FOR EXPEDITED HEARING

Dear Commissioner Haines:

On January 19, 1988, I filed a Petition for Zoning Variance on behalf of our client, Washington/Baltimore Cellular Telephone Company doing business as Cellular One in order to permit a 150 foot self-supporting monopole communications tower. Cellular One desperately needs to install this tower as part of its growing cellular network in order to address the heavy volume of calls in this area of the Baltimore County Beltway and Belair Road just west of I-95.

In view of the fact that our client is a public utility, we had hoped that an early hearing date would be assigned by the Zoning Office. However, on February 23, 1988, I learned from your Assignment Clerk, Ms. Gwendolyn Stephens, that a hearing in this case has been unofficially listed for April 26, 1988. The purpose of this letter is to respectfully request that this case be assigned to an earlier date if your hearing docket permits. For your information, our petitioner's case is likely to take only one half hour and we are not anticipating any protests given the highly commercial and industrial nature of this north side of the beltway situated as it is on The Howard Plumbing Company site. Furthermore, I have been advised by our client that the adjacent property owner which might conceivably be impacted by the tower has reviewed the site plan and indicated that he does not find it objectionable.

The Honorable J. Robert Haines  
February 24, 1988  
Page 2

Consistent with the request, my partner, Newton Williams, has advised me that he may be speaking with your office today concerning a possible request to continue a hearing which originally had been set in his case for April 8.

We fully understand that your office is besieged with a heavy docket of zoning petition cases and that your office makes every effort to schedule cases as promptly as possible. Were it not for the special and emergency circumstances which this public utility client finds itself, we would otherwise not be requesting a hearing date earlier than the as yet unofficial April 26 date.

We sincerely appreciate your kind consideration of this request. If Ms. Stephens or any other member of your staff needs any additional information from us with regard to this case, we will immediately furnish the same.

With kind regards, I am

Sincerely,

Steve Nolan

Stephen J. Nolan

SJN/emd

cc: Ms. Emilienne O'Rourke  
Real Estate Manager  
Cellular One

Kathrine M. Howard  
General Partner  
The Howard Fitch Company

Law Offices  
NOLAN, PLUMHOFF & WILLIAMS  
CHARTERED  
SUITE 1105, HAMPTON PLAZA  
300 EAST JOPPA ROAD  
TOWSON, MARYLAND 21204-3012  
(301) 922-7800  
TELEFAX (301) 926-2765

February 17, 1988

Mr. W. Carl Richards, Jr.  
Zoning Commissioner  
County Office Building  
111 W. Chesapeake Avenue  
Towson, Maryland 21204

Re: Request for Hearing  
Case No. 88-268

Dear Mr. Richards:

This will confirm that I spoke with your office yesterday, February 16, 1988, requesting a hearing date in the above mentioned case. I was informed that a hearing date would be determined within the next two weeks.

Very truly yours,

Meredith Howard  
Marcie Zink  
Legal Assistant

MZ/emd

cc: Ms. Emilienne O'Rourke  
Cellular One

GERHOLD, CROSS & ETZEL  
Registered Professional Land Surveyors  
412 Delaware Avenue  
TOWSON, MARYLAND 21204  
VALLEY 3-8870

DATE 1-19-88

RE Howard Fitch

Cell - 1 OVERSEA SITE

TO Steve Nolan

TRANSMITTAL LETTER

ATTN:

NO. OF	ITEM	TITLE
10	Prints	Plot
6	Copies	Description

REMARKS



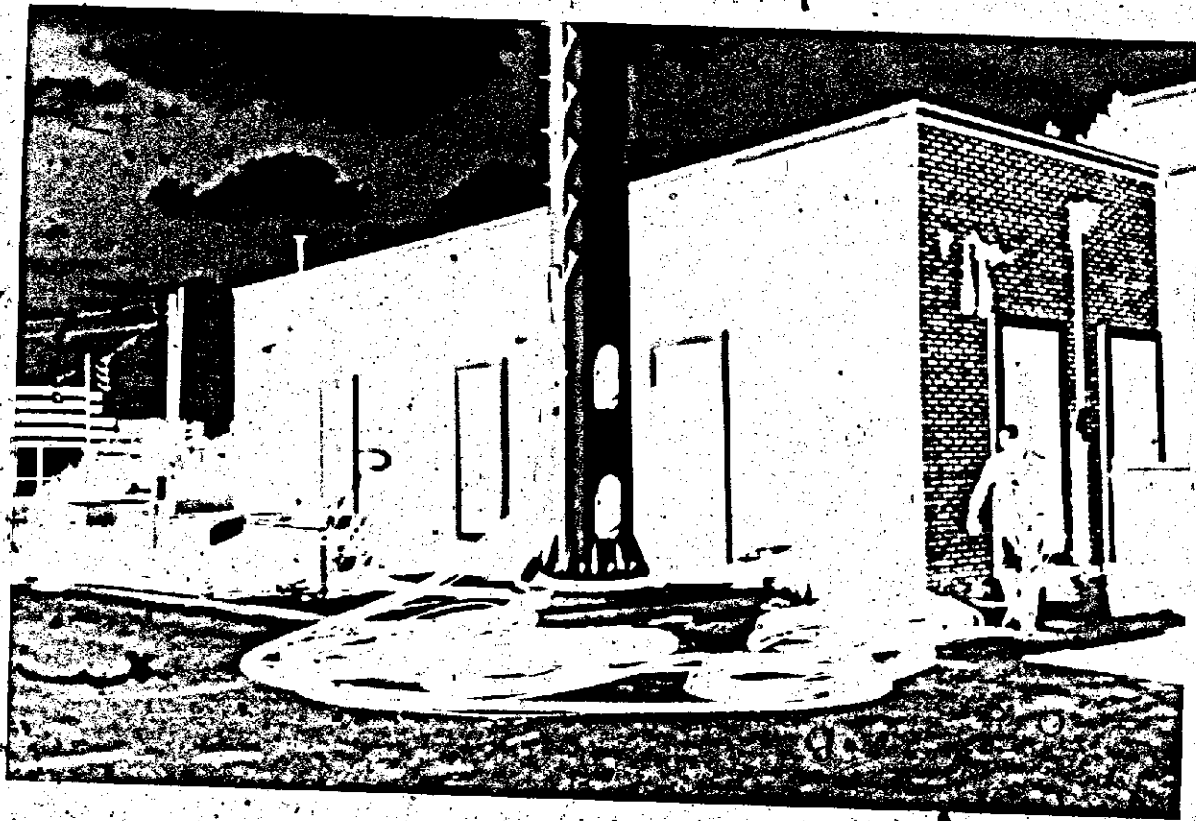


Photo E



Photo F

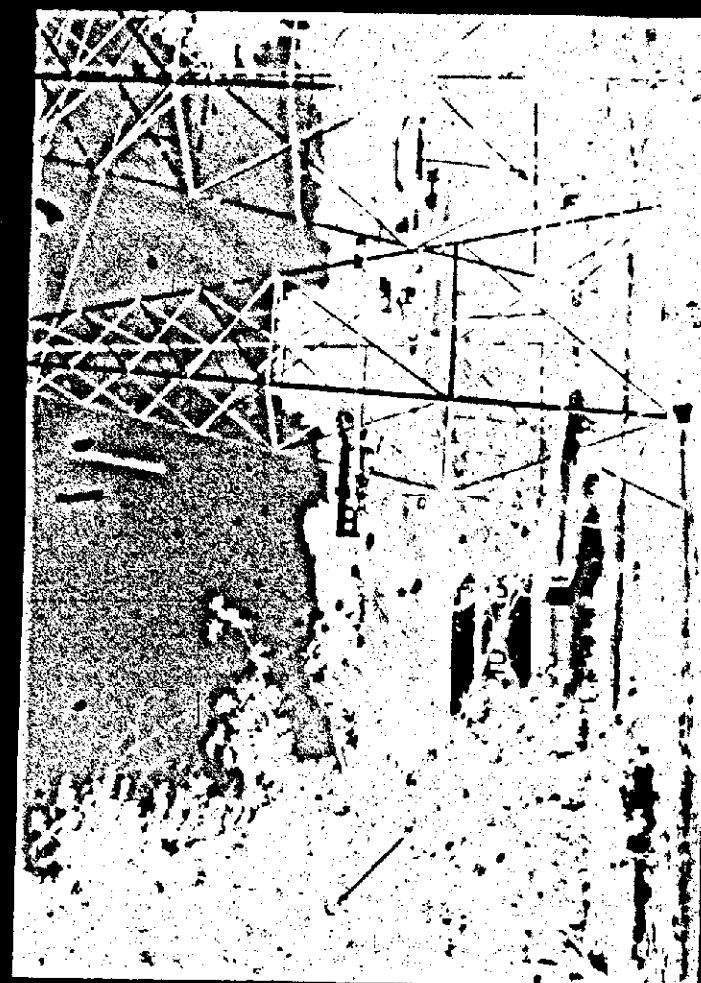


Photo G

CASE No. 88-436-A  
SE/S FITCH LANE, 1850' SW Fitch Ave

PETITIONERS  
EXHIBIT 3

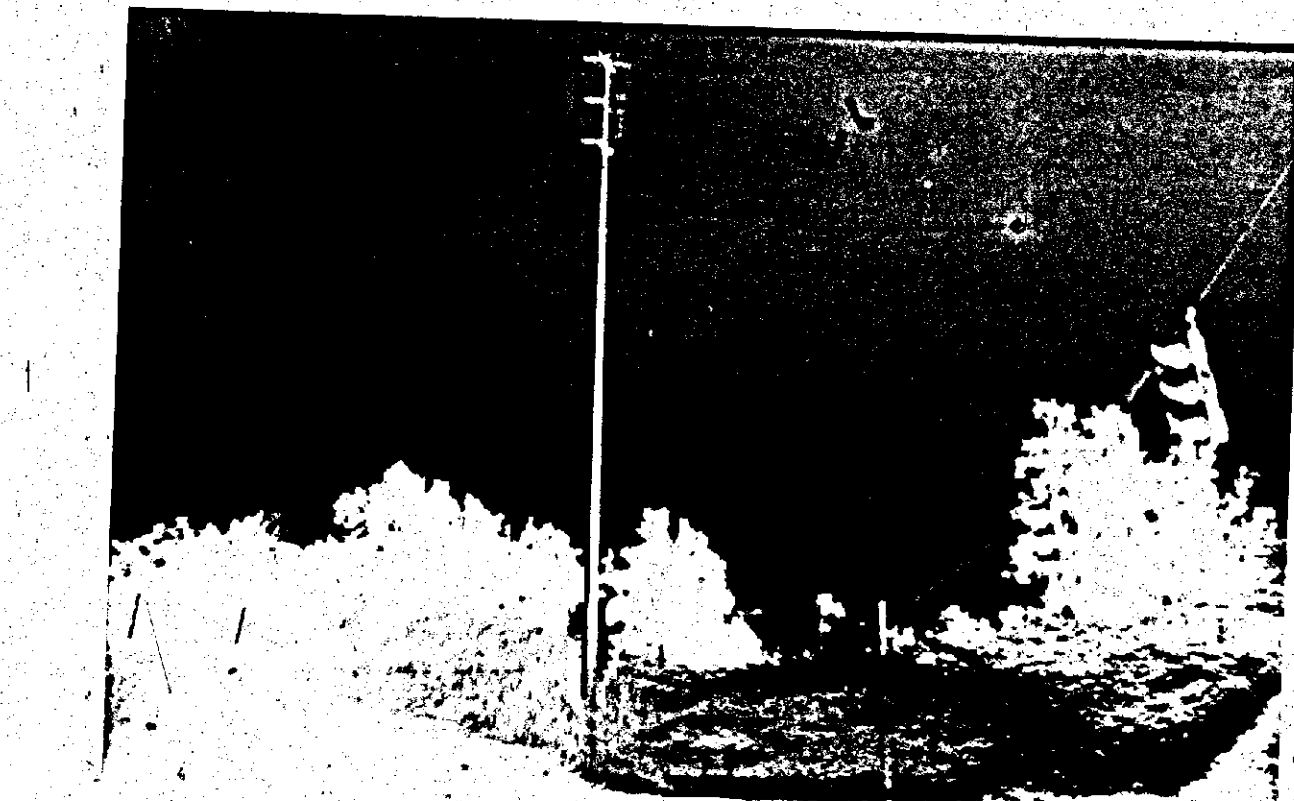


Photo B



Photo A

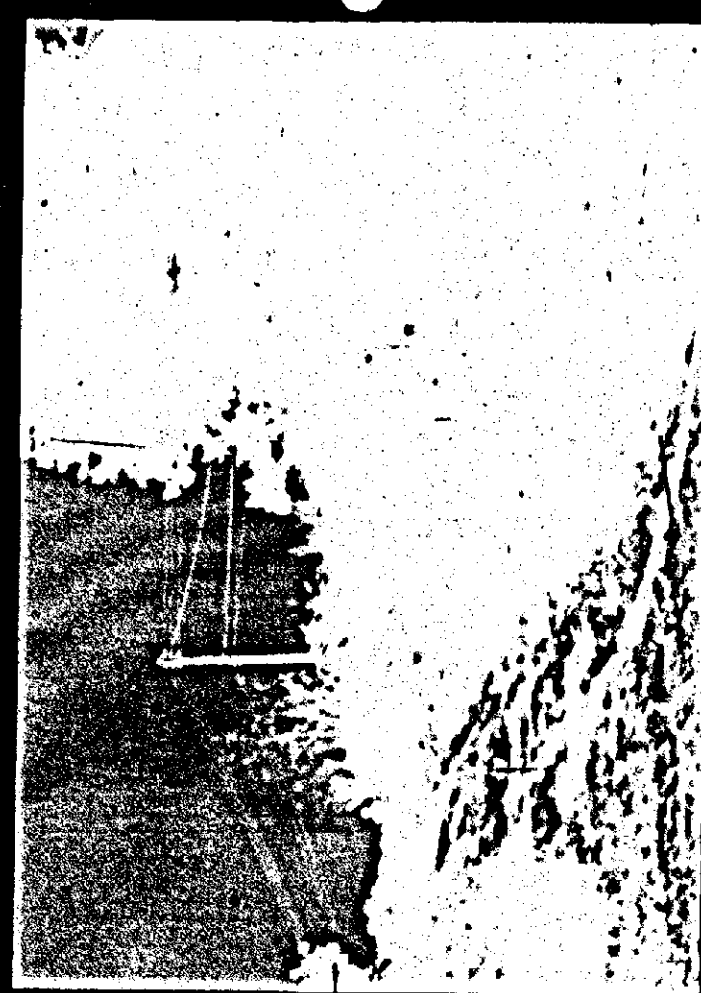
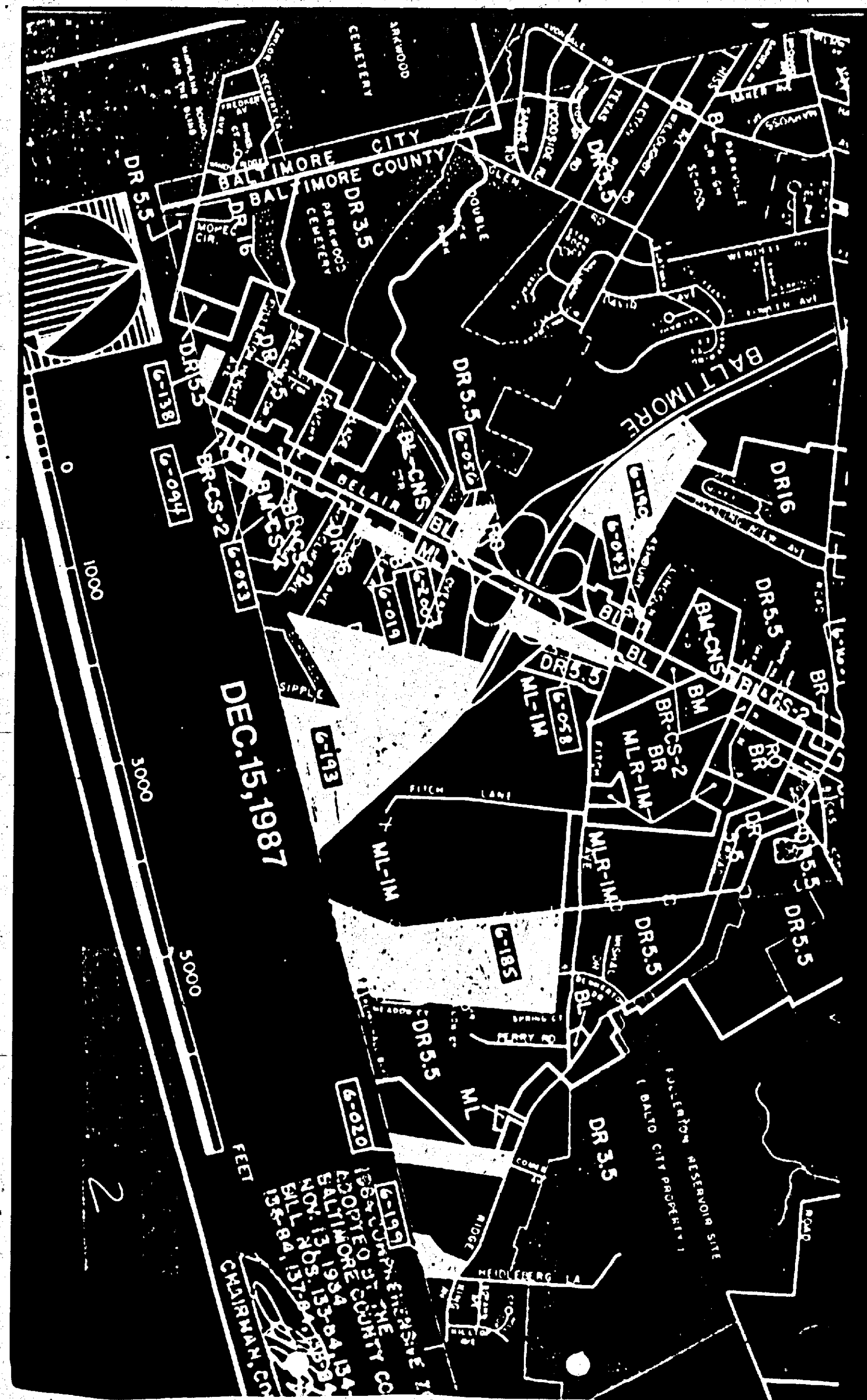
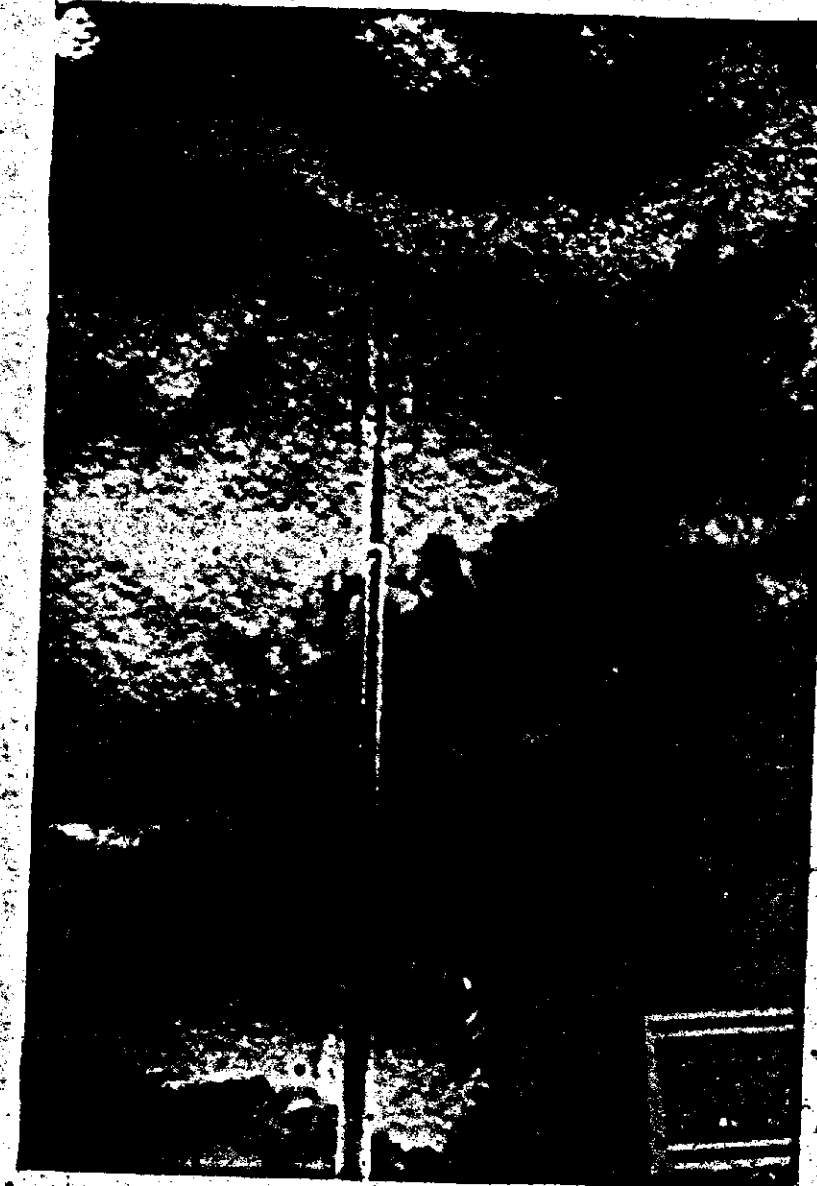


Photo C



Photo D

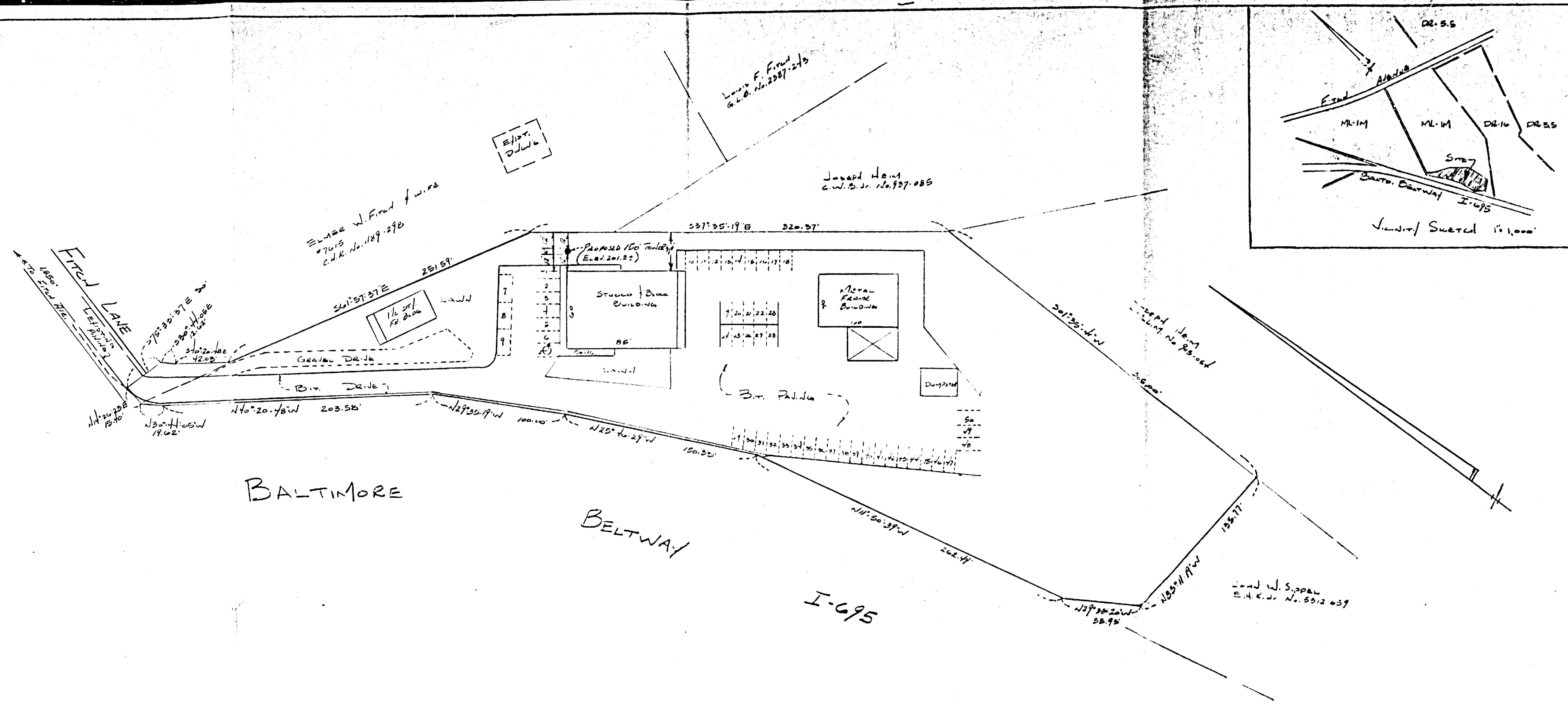
PETITIONERS: THE HOUNDED FITCH CO. CELLULAR ONE 3 FITCH LANE  
CASE No. 88-436-A



Baltimore County  
Zoning Commission  
Office of Planning & Zoning  
Towson, Maryland 21204

Petitioners Exhibit  
on Case 87

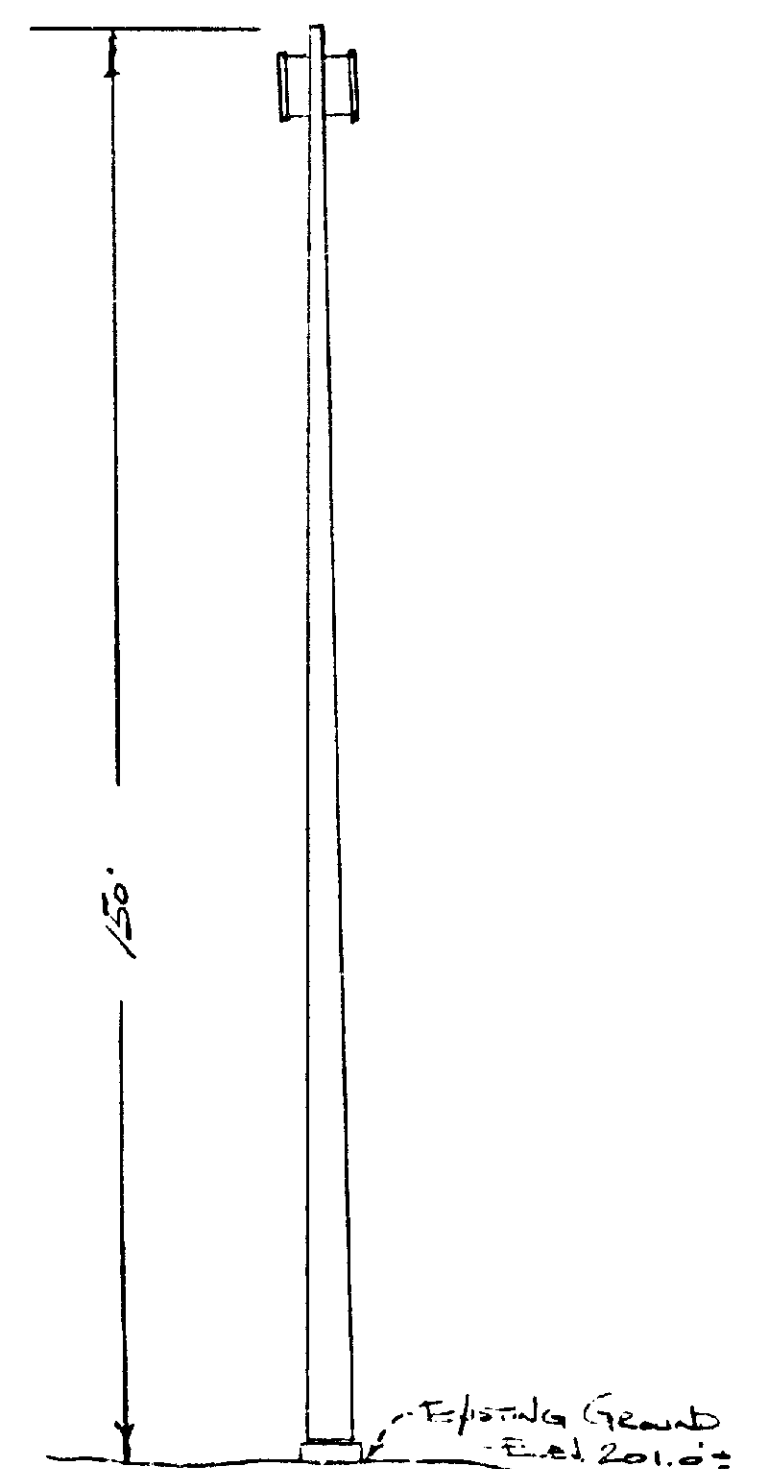




BALTIMORE

BELTWAY

I-695



Note: Accessory Equipment will be housed in existing building

TOWER PROFILE  
No SCALE (LOOKING NE)

PLAT TO ACCOMPANY  
PETITION FOR ZONING VARIANCE FROM  
SETBACK REQUIREMENTS FOR 150' MINIMUM  
COMMUNICATIONS TOWER  
PETITIONERS: HOWARD-FITCH CO. (OWNER) AND  
WASHINGTON/BALTIMORE CELLULAR TELEPHONE  
CO. (LEASER)  
PROPERTY KNOWN AS:  
N° 7617 FITCH AVENUE  
HOWARD-FITCH COMPANY  
LOCATED IN  
H&E-LOC. DIST. SECT. CO. - MD.

OWNER: HOWARD-FITCH CO.  
7617 FITCH AVE.  
BALTIMORE, MD. 21206  
TOWER H&A: 2.66  
EXISTING ZONE: M-1  
DEED REF: E.D.M. NO. 0222.972  
ACCT #: 000000055  
APPROVED SITE PLAN 11/21/86  
C-2031-86

#268



Revised Jan. 17, 1988  
Approved Dec. 4, 1987  
Scale 1"=40'  
JAN 2, 1987  
GERALD, CLARK & TEELE  
Reg. Land Surveyors  
412 BALTIMORE AVE.  
TOWSON, MD. 21206/ 923-4470